Investigating the role of virtual reality in geography via Google Expeditions

Conference or Workshop Item

Investigating the role of virtual reality in Geography via Google Expeditions

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The Open University

FSC Bringing Environmental Understanding To All

The Association for Science Education
Promoting Excellence in Science Teaching and Learning

Geographical Association

Google Expeditions

The project

- Investigating the role of virtual reality in science and geography school education
  - for teaching concepts and phenomena
  - to support geographical and scientific enquiry
  - to complement physical field trips

Agenda

- What is virtual reality?
- Google Expeditions
- Demo
- Individual activity
- Group discussion

What is virtual reality?

A simulated environment on a computer or mobile platform (e.g., smartphone, tablet):

Second Life

Virtual Skiddaw: 3D Geology Field Trips (Unity 3D)

Head-mounted Displays

Viewers

Mobility

Google Expeditions


Tablet

+


Smartphone

+


Cardboard Viewer

+


App

+


Router

Google Expeditions App

- Free app, available on Android and iOS platforms
- Over 500 expeditions (three types)
  - physical locations, e.g. London Olympic Park, International Space Station
  - simulations, e.g. process of photosynthesis and pollination
  - career expeditions, e.g. day in the life of a software developer, Dean of an Engineering Faculty
- Each expedition has
  - Photospheres (360° view) with some explanatory text, points of interest and questions (Guide mode)
  - Google Cardboard viewer gives the 3D view (follower mode)

How you could help us?

- Trying it out today (Demo)
- Individual activity – thoughts on using virtual reality in your teaching (activity sheet)
- Group discussion – using virtual reality in enquiry

Demo: List of Expeditions

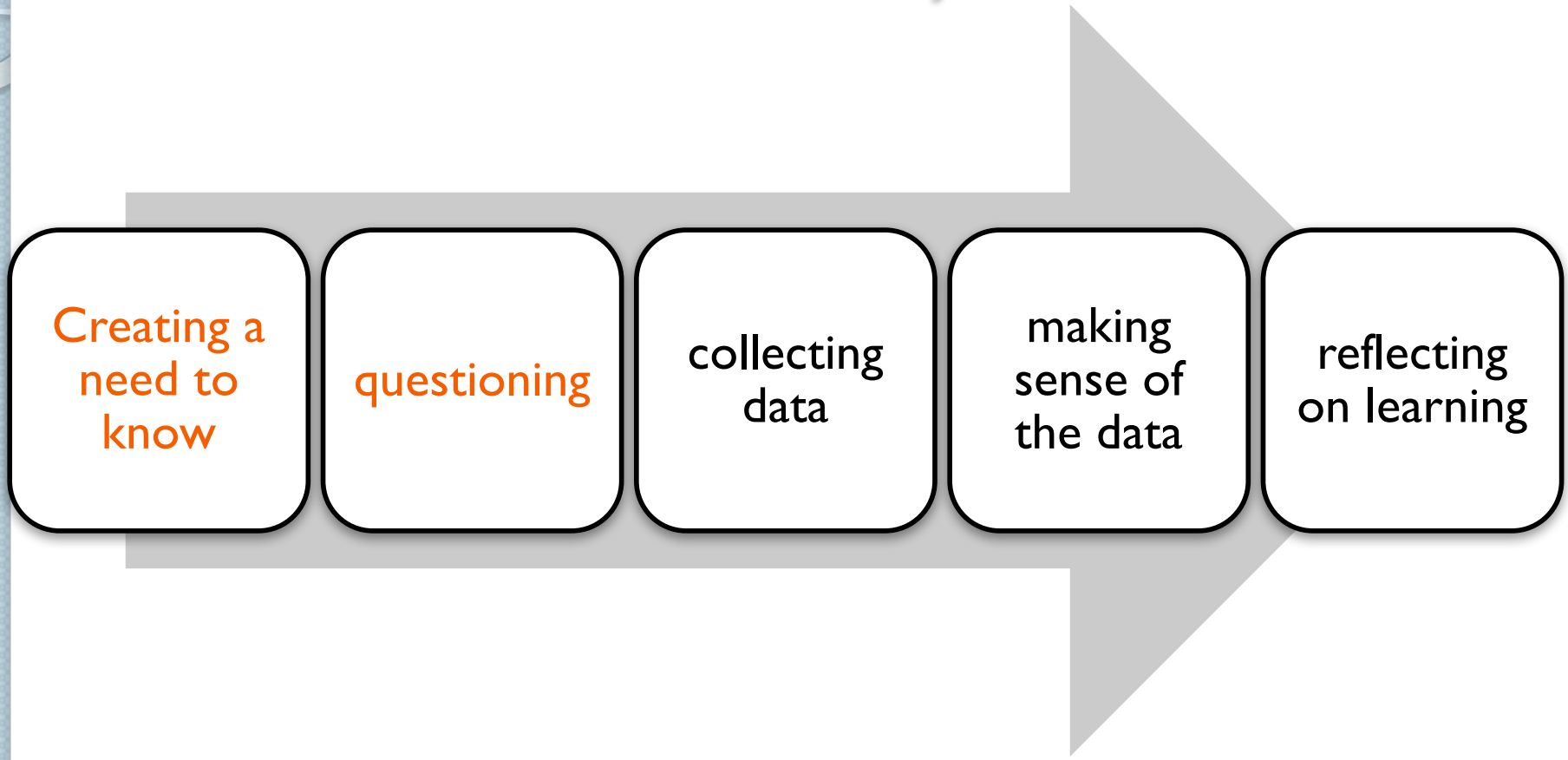
- Rio de Janeiro and Sao Paulo
- Borneo: Plant Adaptations
- The Great Barrier Reef
- Volcanoes around the world
- London Olympic Park

Individual activity

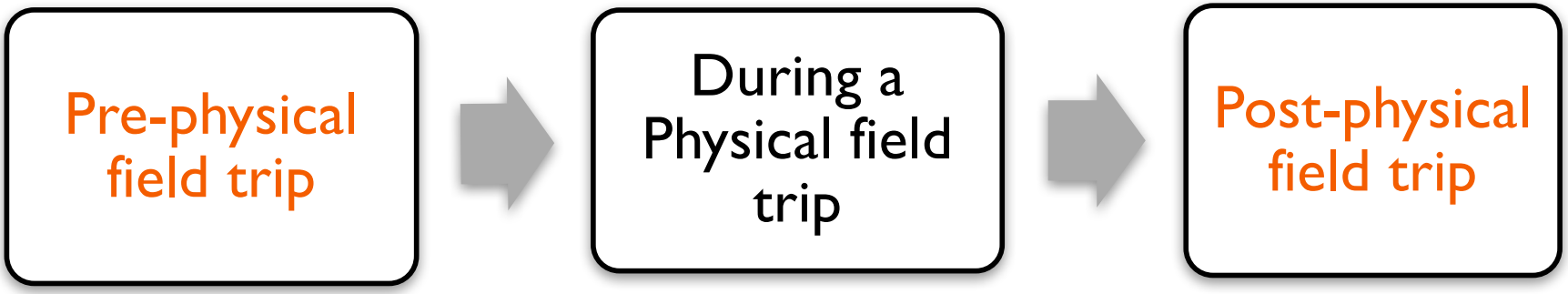
Considering any one of the stages you teach/train (e.g. KS1, KS2, KS3, KS4, etc.)

- Think of ***one example*** on how you would use ***Virtual Reality*** in a lesson or a set of lessons.
- It could be a difficult concept or a process or any topic where you feel Virtual Reality could play a role.
- ***Explain your choice***

Geographical enquiry and Virtual Reality



Enquiry for physical field trips



Group activity

- What are your current practices of teaching questioning?
- How would you use Virtual Reality to facilitate questioning?

Website and contact details

- Project website:

http://www.shaileyminocha.info/google-expeditions/; has links to blog-posts

- email addresses:

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